Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Interference Immunity Performance	)	ET Docket No. 03-65
Specifications for Radio Receivers	)	
	)	
Review of the Commission's Rules	)	MM Docket No. 00-39
and Policies Affecting the Conversion	)	
to Digital Television	)	

REPLY COMMENTS OF THE CONSUMER ELECTRONICS ASSOCIATION

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TABLE OF CONTENTS

EXECUTIVE SUMMARY

Like most commenters is this proceeding, CEA agrees with the Commission's expressed conclusion that "it is preferable to rely primarily on market incentives and voluntary industry programs" for receiver performance standards. CEA and most commenters therefore oppose the Commission adopting mandatory receiver performance standards. Competitive innovation and changes in the radio frequency environment are much too fast-paced to be subjected to the delays inherent in the regulatory rulemaking process for products such as receivers.

DTV reception is a complex process affected by many issues, two principal ones of which are broadcast transmitter power and receiver performance. Analog and digital reception was tested in the field by the FCC staff in the 2000-2001 period, and with the receivers then available the staff concluded that when full-powered analog and digital signals are compared, success for digital reception surpassed that for analog reception. A big problem today, however, is that most (an estimated 69 percent) of the DTV stations are broadcasting at less than full power or not at all. All of the consumers within a station's analog service area expect to be able to receive the station's digital signal, but reception cannot reasonably be expected if the station fails to broadcast with its full authorized power.

Manufacturers have a strong market-driven interest to provide receivers that meet or exceed consumer expectations. The fiercely competitive nature of the electronics industry ensures that each successive product cycle brings innovations and adds value for the consumer while increasing the performance and reliability of products. This is what accounts for the rapid market-driven improvement in each generation of DTV receiver chipsets, as confirmed by the FCC staff's field tests.

In this regard, receivers for digital television are no different than receivers for any other service. CEA is working with the two principal associations of broadcasters, NAB and MSTV, within an ATSC Specialist Group to develop a Recommended Practice for DTV receivers that we hope will be complete by next spring. In their comments, CEA, ATSC, NAB and MSTV all express support for this process. CEA believes that the process for determining voluntary standards will help broadcasters and equipment manufacturers find common ground on the remaining transmission and reception issues facing the DTV transition and provide a proper framework for continual improvement.

Were the Commission to impose mandates on receiver design, manufacturers would naturally focus their efforts on building to meet the Commission standard, rather than striving to build the best products possible. Voluntary standards are more likely to reflect the current state-of-art because they can be amended relatively easily to reflect changes in technology and implemented consistent with design cycles. In contrast, Commission mandated performance standards could be changed only through a lengthy notice-and-comment rulemaking process, by the end of which newer technology would be available than that being considered.

The nature of technology in the competitive marketplace is continual improvement based upon the latest technological developments, provided that the regulatory environment does not discourage technological advancement and its timely incorporation in consumer products. We urge the FCC not to deviate from its existing position that consumers and innovation would not be well served by government-imposed receiver performance mandates.

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REPLY COMMENTS OF THE CONSUMER ELECTRONICS ASSOCIATION

The Consumer Electronics Association ("CEA") respectfully submits these reply comments to the Notice of Inquiry ("NOI") in the above-captioned proceeding.[1] Like most commenters, CEA agrees with the Commission's expressed conclusion that for receiver performance standards "it is preferable to rely primarily on market incentives and voluntary industry programs."[2] Competitive innovation and changes in the radio frequency environment are much too fast-paced to be subjected to the delays inherent in the regulatory rulemaking process for products such as receivers.

With regard to digital television ("DTV") receivers in particular, CEA is engaged in a process with the National Association of Broadcasters ("NAB"), the Association for Maximum Service Television ("MSTV"), and other experts to establish voluntary standards under the auspices of the Advanced Television Systems Committee ("ATSC"). For the many reasons

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[1] *Interference Immunity Performance Specifications for Radio Receivers; Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television,* Notice of Inquiry, 18 FCC Rcd 6039 (2003)("*NOI*").

[2] *Id.* at ¶ 2.

explained by CEA and others in the record of this proceeding, addressing DTV receivers in this expert process is far preferable to the FCC mandating standards, which inevitably would freeze DTV technology at today's level of technological development.

I. INTRODUCTION

In this proceeding the Commission is examining whether it should continue to rely on marketplace forces or voluntary industry standards for detailed performance specifications for receivers, or whether it should depart from 90 years of historical precedent and for the first time adopt and place in its rules detailed standards to regulate the performance of receivers in some or all radio services as part of its spectrum management policies.[3] The term "receivers" as used by the Commission in this proceeding encompasses a wide array of consumer products, including satellite receivers, cell phones and pagers, unlicensed cordless phones and wireless local area network (WLAN) computer equipment, and television sets and AM/FM radios.

CEA recognizes the public's need to accommodate increasing demands for access to the radio spectrum and applauds the Commission's efforts to evaluate its spectrum policies in light of increasingly rapid technological innovation. However, in the *NOI*, although it endorses marketplace solutions and voluntary standards, the Commission also suggests that it is considering a departure from its flexible markets-driven policies and instead may regulate performance standards for radio and television receivers either generally or in specific services.

[3] *See Spectrum Policy Task Force Report,* ET Docket No. 02-135, November 15, 2002."*Task Force Report*").

CEA and an array of other organizations oppose consideration of incorporating mandatory receiver performance standards into the Commission's rules.[4] The majority of comments, including those of CEA, support continued reliance on the marketplace and voluntary industry standards because these are better suited to the fast pace of changing technologies and spectrum environments.

The Commission and some commenters address DTV receivers in particular.[5] CEA is working with a Specialist Group of the ATSC to develop a Recommended Practice for DTV receivers that we hope will be completed by next spring.[6] Both of the principal associations of broadcasters, NAB and MSTV, also are participating in the same effort and their comments, like CEA's, express support for this effort.[7] We believe that the voluntary standards process will help broadcasters and equipment manufacturers find common ground on the remaining transmission and reception technical issues facing the DTV transition.

In addition, in July CEA convened a Discovery Group meeting at which experts focused on interference immunity of home electronic equipment with an emphasis on broadcast radio and

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[4] *See*, *e.g.,* Comments of Cellular Communications and Internet Association ("*CTIA Comments*"); Comments of the Telecommunications Industry Association ("*TIA Comments*"); Comments of the WiFi Alliance; Comments of the Satellite Industry Association ("*SIA Comments*"); Comments of Itron Inc.; Comments of Intersil Corp.; Joint Comments of Metrocall Holdings, Inc., Arch Wireless Operating Co., LLC, Weblink Wireless, L.P., the Allied National Paging Assoc., and American Paging Carriers; Joint Comments of the BellSouth Corp. and Cingular Wireless LLC ("*BellSouth and Cingular Comments*"); Comments of AT&T Wireless Inc. ("*AT&T Wireless Comments*"); Comments of Harris Corporation; Comments of Nokia Inc.; Comments of Ericsson Inc.; Comments of E.F. Johnson ("*E.F. Johnson Comments*"); Comments of Nortel Networks; Comments of Zenith Electronics Corp. ("*Zenith Comments*"); Comments of iBiquity Digital Corporation; and Comments of PanAmSat Corporation ("*PanAmSat Comments*").

[5] *See NOI* at ¶¶ 34-36.

[6] *See* Comments of the Advanced Television Systems Committee ("*ATSC Comments*").

[7] *See* Comments of the Association for Maximum Service Television, Inc., and the National Association of Broadcasters (July 21, 2003) ("*Joint Broadcaster Comments*").

television receivers. The Discovery Group attendees agreed that the ongoing efforts by the ATSC to develop a Recommended Practice for DTV receiver performance should be supported.

II. BACKGROUND

The Consumer Electronics Association is the principal U.S. trade association for the consumer electronics and information technologies industries. Our members design, manufacture, distribute and sell a wide range of consumer receivers, including digital and analog television receivers and monitors, video recorders ("PVRs" and "VCRs"), direct broadcast satellite radio ("DARS") and television ("DBS") equipment, broadcast AM and FM radios, and many similar devices. Our members also design and manufacture unlicensed devices that include radio receivers, such as Wi-Fi network devices that connect personal computers, personal digital assistants ("PDAs") and laptops to peripheral devices and networks; cordless phones; baby monitors; and wireless headsets. CEA's more than 1,200 companies include all of this country's major consumer electronics manufacturers.

III. VOLUNTARY INDUSTRY PERFORMANCE STANDARDS FOR DIGITAL TELEVISION RECEIVERS ARE PREFERABLE TO GOVERNMENT MANDATES

A. Broadcasters And Equipment Manufacturers Are Cooperating Under The Auspices Of The ATSC To Develop Voluntary Standards

The broadcast and consumer equipment manufacturing industries have cooperated with each other in many ways throughout the 15 year process culminating in DTV. Both the transmission and reception of digital broadcast signals is a relatively new phenomenon. The ATSC Standard for DTV was adopted by the FCC with strong support from both the broadcast

and the consumer electronics industries.[8] The first receivers began to appear in the marketplace during the fall of 1998, just as the first scheduled digital broadcasts began pursuant to the Commission's Rules.[9] Throughout this period both broadcasters and receiver manufacturers understood the "chicken-and-the-egg" problem, but both industries coordinated the rollout together and the first DTV receivers became available at the same time as the first programs were being broadcast.

Today the spirit of cooperation predominates. NAB, MSTV and CEA, among others, are working together within the ATSC Specialist Group on Receivers (T3/S10) to study receiver issues in an honest and forthright manner, with the goal of developing a Recommended Practice for DTV Receiver Performance.[10] The Group's work is expected to be completed within a relatively short period, with a target of Spring 2004. A Recommended Practice is much more flexible than a government-mandated standard and could more readily be changed as technology evolves and improves.

In addition, CEA works with NAB, MSTV and retailers in a variety of ways to educate consumers about the benefits of digital broadcasting. For example, with ATSC and NAB, CEA sponsored the "DTV Drafthouse" to showcase the latest broadcast DTV content and technologies at the 2003 NAB convention in April. CEA, in association with the Custom Electronic Design and Installation Association ("CEDIA"), is co-hosting an HDTV Update meeting during the CEDIA EXPO 2003 in early September. And during September and October CEA will host six

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[8] *See Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service,* MM Docket No. 87-268, Fourth Report and Order, 11 FCC Rcd. 17771 (1996)("*Fourth Report and Order*").

[9] *See Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service,* MM Docket No. 87-268, Fifth Report and Order, 12 FCC Rcd. 12809 (1997)("*Fifth Report and Order*").

[10] *See ATSC Comments*; *Zenith Comments*; and *Joint Broadcaster Comments,*.

"HDTV Update" breakfasts in different cities that provide a national perspective of where the DTV transition is heading and brings local cable operators and broadcasters together with retailers and other local DTV leaders to discuss collaboration to achieve greater consumer awareness of DTV and HDTV. CEA also sponsors the Academy of Digital Television Pioneers to recognize individuals who have fostered DTV technology and products, and to encourage others to do so.

B. Manufacturers Have A Strong Market-Driven Interest In Providing Receivers that Meet or Exceed Consumer Expectations

CEA's members seek to constantly improve receiver technology and to bring to consumers the latest advancements. In their comments two lone entities, Sinclair Broadcast Group, Inc. ("Sinclair") and Pappas Telecasting Companies ("Pappas"), suggest that DTV receiver design is primarily responsible for DTV reception difficulties but fail to consider and address the effect on reception of the lower than maximum allotted power that the majority of DTV stations on the air today are using, including most of their own stations.[11] Nor does either address that the Commission's own staff thoroughly tested early DTV receivers and based on extensive field testing, found that digital reception exceeded that of analog reception when using consumer-grade receivers in a fair "oranges-to-oranges" comparison.[12]

In its comments, Sinclair takes quotes out of context to assert that receiver manufacturers are focused on the cable and satellite industries, and then jumps to the conclusion that this means

[11] *See* Comments of Sinclair Broadcast Group Inc. ("*Sinclair Comments*") and Pappas Telecasting Companies ("*Pappas Comments*").

[12] FCC/OET Report TRB-00-2, *A Study of ATSC (8-VSB) DTV Coverage in Washington, DC, and Generational Changes in DTV Receiver Performance,* Interim Report (April 9, 2001) ("*FCC/OET Report*"). *See also* ATSC, *Performance Assessment of the ATSC Transmission System, Equipment and Future Directions, Report of the ATSC Task Force on RF System Performance* (April 12, 2001).

hat DTV receiver manufacturers are not devoting enough resources to improve over-the-air ("OTA") reception products.[13] The reality is quite different.

In fact, manufacturers have a tremendous market incentive to produce receivers that function satisfactorily under the most challenging conditions. The fiercely competitive nature of the consumer electronics industry ensures that each successive product cycle brings innovations that add value for the consumer while increasing the performance and reliability of the products on the market. That is what accounts for the rapid market-driven improvement in each generation of DTV receiver chipsets, as confirmed by the Commission's independent field tests.[14]

Were the Commission to impose mandates on receiver design, manufacturers would naturally focus their efforts on building to meet the Commission standard, rather than striving to build the best products possible. In order to ensure maximum innovation benefiting consumers, the FCC should not deviate from its consistent position that there is no need for government-mandated minimum performance levels for DTV receivers.[15]

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[13] *See Sinclair Comments* at 4, fns. 5, 6. When considering Sinclair's complaints about manufacturers, it is to be noted that just last year the Commission took the unusual step of admonishing Sinclair "for its failure to comply with its DTV construction obligations." The Commission denied applications for extension of time to construct DTV facilities filed by *sixteen* stations owned or managed by Sinclair because it found that Sinclair "had not taken all reasonable steps to complete construction of its DTV facilities." *See* Public Notices, Denial of Applications for Extension of Time to Construct a Digital Television Station, DA 02-1334, DA 02-1359 and DA 02-1427 (rel. June 7, 11, and 19, 2002, respectively), 11 petitions for recon. denied, one remains pending. *See, e.g., Request for Extension of Time to Construct Digital Facilities WSTR-DT, Cincinnati, Ohio, Memorandum Opinion and Order,* 17 FCC Rcd 17143 (2002). Applications for Review are pending on the 11denied petitions for recon.

[14] *See FCC/OET Report*.

[15] *See Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service, supra* note 8, Memorandum Opinion and Order on Reconsideration of the Sixth Report and Order, 13 FCC Rcd 7418 at 7486-7 (1998); *Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television,* MM Docket No. 00-39, Report and Order and Further Notice of Proposed Rule Making, 16 FCC Rcd 5946 at 5980-8 (2001); *Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television,* MM Docket No. 00-39*,* Second Report and Order

Notwithstanding the comments of Sinclair and Pappas, and even though extensive low power operation makes it irrational to believe that consumer reception problems are principally due to receiver issues, we acknowledge that with digital signals, as with analog signals, under some conditions the receiver will have difficulty with signals propagated a certain way. Engineers are constantly attempting to improve receiver technology, not just for DTV but for all services. Our goal – and it should be that of the Commission as well – is to ensure an environment which fosters research and development in receiver technologies and is conducive to improvements being implemented promptly in consumer receivers on an on-going basis and without regulatory delay. The marketplace provides the strongest incentives for continual technical improvement to receivers, whereas government-issued mandates remove many of the incentives.

C. Full Power DTV Broadcast Transmission Is Required For Effective Consumer Reception

If the Commission seeks to take effective action to ensure maximum consumer reception of broadcast DTV, it should require that all licensed broadcasters are transmitting a digital television signal at fully authorized power as soon as possible. Full power operation as contemplated by the Commission in its Table of Allotments is the quickest and surest way to bring digital signals to consumers throughout current stations' coverage areas.

The context of comments by some manufacturers or their representatives that DTV broadcasting is losing ground to high definition television ("HDTV") on cable, satellite and DBS is that of frustration, not disinterest. Manufacturers have spent, and continue to spend, substantial effort and funds to improve over-the-air receivers. Their original business plans were

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and Second Memorandum Opinion and Order, 17 FCC Rcd. 15978 at 15998-99 (2002); recon. denied, *NOI* at fn. 32 and ¶ 50.

made in the belief that by mid-2002 most commercial broadcast stations would be broadcasting at full allotted power and providing regular daily schedules of digital programming so that consumers would have the same array of programming available on digital channels as on analog, accompanied by additional HDTV programming. [16]

After investments were made by manufacturers and sets were rolling into consumer retail outlets, broadcasters began to use just enough power to cover their community of license – which in most cases is just a portion of the stations' analog Grade B service area. A majority of the stations that are on the air with digital signals today are using facilities of less power than allotted by the Commission. According to the Commission's most recent data (July 30, 2003), 30.1 percent of DTV stations have not yet been placed on the air at all; 39.2 percent are on the air but with facilities that are less than those allotted; and only 30.7 percent of FCC-allotted DTV stations have been constructed with full facilities and placed on air.[17] This means that there is no signal at all, or weaker signals than authorized, from 69.3 percent of all DTV stations.

In addition, the digital stations on the air, whether low power or full power, are only required to broadcast for 50 percent of the hours that their analog counterpart is on the air. We have no way of knowing how many broadcasters are operating their digital stations only part-time.[18] Since most of these stations are operating significantly under-powered when on the air,

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[16] *See Fifth Report and Order*.

[17] *See* http://www.fcc.gov/mb/video/dtvstatus.html (visited August 18, 2003).

[18] The minimum broadcast hours for licensed stations will increase to 75 percent next year, and 100 percent in 2005. *See* 47 C.F.R. § 73.624(f). (The simulcast requirement establishes the minimum hours of operation for licensed digital stations.) The Commission has under consideration proposals to repeal the simulcast requirement while keeping the same schedule for phasing in mandatory on-air time. *See Second Periodic Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television*, MM Docket No. 03-15, Notice of Proposed Rulemaking, 18 FCC Rcd 1279 (2003) and the Comments of the Consumer Electronics Association filed in this proceeding at 19-20 (filed April 21, 2003)("*CEA Comments*").

consumers within a station's analog service area may be left out of the same station's digital coverage area; or may be attempting to tune to the digital signal at times when the digital signal is not on the air, since program listings for local digital stations seem to be non-existent even for major stations in the cities.

Understandably, the result has been that even consumers with over-the-air DTV receivers increasingly rely on DBS and cable. Services that began offering high definition programs long after broadcasters now offer multiple channels of HDTV programming 24/7: Showtime, HBO, ESPN-HD, HDNet, Discovery HD, HDNet Movies. The National Basketball Association (NBA) has a part-time channel for HDTV, and channels such as INHD's College Sports Network (CSTV) have announced HDTV plans for this fall. ESPN-HD, for example, passes 50 million homes.[19] Critical mass is forming, but at most hours and in most communities HDTV is available primarily over cable and DBS. As digital sets roll off retailers' floors into homes, consumers are finding that the high quality viewing experience that they expect is more readily accessible through DBS and cable than over-the-air. No amount of smoke and mirrors will hide this fact.[20] Trying to make receiver manufacturers the scapegoat will not improve the picture.[21]

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[19] Ken Kerschbaumer, *ESPN-HD Reaches 50 Million Subs,* Broadcasting & Cable (Aug. 4, 2003).

[20] A prime example is the claim in a July 23, 2003 press release that "DTV signals are now being transmitted in 195 markets that include 98.8 % of U.S. TV households" (http://www.nab.org/Newsroom/issues/digitaltv/DTVStations.asp). The statement literally may be true, but fails to account for the reduced coverage of 56 percent of the on-air DTV stations that use low power. There is no consideration given that many TV households within these markets cannot receive many of the DTV signals due to the stations' low power. Just one example: Sinclair's owned and operated WUXP-DT operates pursuant to an STA on channel 21 in the 30th DMA of Nashville, Tennessee. Its DTV CP authorizes 1,000,000 watts ERP. Its STA was issued for 7600 watts – just 0.76 percent of its authorized power. The digital signal from this station obviously does not reach all of the TV households in the DMA, but that fact is conveniently overlooked and it is the consumers who are misled. They take delivery of their new digital television and then complain that the signal from analog WUXP is clear but they can't get WUXP's digital signal. Their conclusion is that there is something wrong with their new DTV set. Too often the retailer and manufacturer pay the price for low power DTV signals not covering stations' analog service areas.

IV. GOVERNMENT-MANDATED RECEIVER PERFORMANCE STANDARDS WOULD INHIBIT INNOVATION AND DELAY TECHNOLOGICAL ADVANCES BEING INCOPORATED INTO CONSUMER PRODUCTS

Alone among the broadcast commenters, Sinclair and Pappas argue that the FCC should enact specific DTV receiver performance standards or alternatively, officially adopt "voluntary" performance standards. We believe that voluntary receiver performance standards should not be adopted by the Commission in any form because once adopted or required inevitably they will inhibit the development and use of future receiver innovations. The rulemaking process delays the innovator and requires disclosure of valuable design information. This prevents innovators from fully realizing the fruits of their invention and deters others from attempting to develop additional improvements.

Marketplace forces have worked for 80 years to provide the incentive for constant receiver improvement. Several commenters refer to the lack of broadcaster control over receivers as if broadcasters are the customers for receivers, but consumers are the customers for receivers, not broadcasters. If a receiver does not perform up to expectations it is quickly returned to the store. There is no stronger incentive for manufacturers to improve their product than the costly return of products.

Voluntary standards are more likely to reflect the current state-of-the-art because they can be amended relatively easily to reflect changes in technology and implemented consistent with design cycles. In contrast, Commission-mandated standards could be changed only through a

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[21] Contrasting the broadcast experience here in the U.S. with that overseas suggests the scope of the problem. The first regular terrestrial digital broadcasting was initiated here in the United States in 1998. But on August 4 the Berlin area of Germany became the first area in the world to complete the analog-to-digital transition. On that date that last analog broadcast signals were turned off. Broadcast signals now are exclusively digital. *See, Berlin World's First DTT Region* at: http://www.dtg.org.uk/news/world/-berlin_switches_over.htm.

notice-and-comment rulemaking that generally takes two or more years to complete under the best of circumstances. By the time a Petition for Rulemaking is filed, comments submitted thereon, a Notice of Proposed Rulemaking drafted and adopted, more comments and reply comments filed, and a Report and Order issued, the next generation of technology is ready to come off the drawing board. And this is without considering the additional time required for Petitions for Reconsideration and judicial review. Especially if departure from the mandated standard is necessary to implement reception improvements, those improvements would be substantially delayed, if not abandoned, if some particular of the Commission's performance standard would have to be changed.[22]

One cannot exaggerate the complex interdependencies that exist within receiver design.[23] Changing one parameter can and does directly affect other specifications. For example, in urban areas local television signals are beamed with up to a megawatt of power, and often multiple television signals are beamed from the same antenna site. Within line-of-sight to the tower location—which can encompass many miles since such sites are placed as high as possible—receivers need to be designed with only minimal sensitivity. But with multiple strong megawatt signals present, receiver selectivity and inter-modulation characteristics become of primary importance. On the other hand, in a rural area far from the television station towers, a receiver must be very sensitive to detect and decode the same signals, but selectivity and inter-modulation requirements are much less because there are no strong signals in the immediate area. These are basic trade-offs in all receiver design, whether it is a television receiver, FM radio receiver, or a cell phone.

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[22] *See, e.g., AT&T Wireless Comments* at 9-14; *BellSouth and Cingular Comments* at 10-16; *PanAmSat Comments* at 2; *SIA Comments* at 2; and *E.F. Johnson Comments* at 2.

[23] *See, e.g., TIA Comments*; *AT&T Wireless Comments* at 12; and *E.F. Johnson Comments* at 3.

Pappas makes three additional arguments that it says favor mandatory performance standards for television receivers, but none is relevant. First, Pappas argues that the Commission should consider the dampening effects of its not having adopted the AM stereo standard and adopt the ATSC voluntary standards to prevent the same outcome. But the AM stereo standard in fact was adopted in 1993 at the specific statutory direction of Congress.[24] In any event, that standard is a compatibility standard, not a performance standard such as is being discussed in this proceeding.[25] CEA always has been a strong supporter of FCC adoption of compatibility standards. The most recent broadcast standards analogous to the AM stereo standard are the ATSC DTV standard and the IBOC digital radio standard. We strongly supported the AM stereo standard adopted by the Commission.[26] We strongly supported adoption of the ATSC DTV standard.[27] And we also have expressed our strong support for adoption of the IBOC digital radio standard.[28]

Next, Pappas argues that the cable compatibility "plug-and-play" agreement was created by industry and the Commission requested to adopt its provisions, so Pappas says that the voluntary receiver performance practice being fashioned by the ATSC also should be submitted to and approved by the FCC. But the "plug-and-play" agreement is a compatibility standard of the type that CEA and various industries always have supported, not a performance standard.

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[24] *See* Telecommunications Authorization Act of 1992, Pub. L. No. 102-538, § 214; *Amendment of the Commission's Rules to Establish a Single AM Radio Stereophonic Transmitting Equipment Standard*, Report and Order, 8 FCC Rcd 8216 (1993) ("*AM Stereo Report and Order*").

[25] *See, for example,* Stanley M. Besen and Leland L. Johnson, *Compatibility Standards, Competition, and Innovation in the Broadcasting Industry* (prepared for the National Science Foundation by The RAND Corporation, Nov. 1986).

[26] *See AM Stereo Report and Order* at ¶ 6.

[27] *See Fourth Report and Order*.

[28] *See* Comments of Consumer Electronics Association in MM Docket No. 99-325 (filed Feb. 19, 2002).

Furthermore, the Commission's actions on the cable compatibility "plug-and-play" agreement are in the context of carrying out the explicit statutory mandates of Section 624A (to provide for compatibility between cable systems and consumer electronics equipment) and Section 629 (requiring commercial availability of navigation devices).[29] In contrast, the Commission lacks statutory authority to regulate the performance standards of receivers,[30] and in any event certainly is not statutorily directed to do so.

Finally, Pappas questions whether ATSC reception capability will be provided in cable-ready DTV receivers. We need only note that, in response to the FCC's May 20 letter asking for more information about certain aspects of the digital television transition, every major DTV manufacturer committed that receivers labeled as "cable ready" under the cable compatibility "plug and play" agreement will have both QAM and ATSC tuning/decoding capability.

A Commission-mandated performance standard at best would serve as the lowest common denominator, severely curtailing the incentive for work being done today at multiple companies to attain better performance at a cost point acceptable to the consumer. At worse, rolling out improvements would be delayed years if one aspect of an FCC-adopted standard had to be changed to accommodate the improvement. Indeed, a manufacturer's willingness to invest in the research and development would be affected since there would be little incentive to

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[29] *See* 47 U.S.C. §§ 624A, 629; *In the Matter of Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices*, CS Docket No. 97-80, *Compatibility Between Cable Systems and Consumer Electronics Equipment*, PP Docket No. 00-67, Further Notice of Proposed Rulemaking, 18 FCC Rcd 518 (2003).

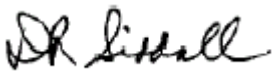
[30] *See AT&T Wireless Comments* at 14-18 and *CEA Comments* at 11-13. When enacting the provision now codified at 47 U.S.C. § 303(s), Congress rejected authorizing the Commission to set "minimum performance standards" for television receivers. *See* Comments and Reply Comments of the Consumer Electronics Association in MM Docket No. 00-39 (filed May 17, 2000 and June 16, 2000, respectively).

outperform the standard, even when technological advances readily permit doing so, if FCC standards compliance is viewed by consumers as "all one really needs."

V. CONCLUSION

The nature of technology in the competitive marketplace is continual improvement based upon the latest technological developments, provided that the regulatory environment does not discourage technological advancement and its timely incorporation into consumer products. We urge the Commission not to deviate from its existing position that consumers and innovation would not be well served by government-imposed receiver design mandates.

Respectfully Submitted,



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